ALNUS RUBRA / POLYSTICHUM MUNITUM

Red alder / sword fern

Abbreviated Name: ALRU/POMU

Sample size = 5 plots

DISTRIBUTION: Probably occurs throughout most of the Puget Trough ecoregion and in adjacent ecoregions. The vast majority of existing examples are not of natural origin.

GLOBAL/STATE STATUS: G4S4. Probably more abundant and widespread now than in pre-settlement times. Almost all remaining examples are the result of regeneration after timber harvest. Current timber value of red alder poses some degree of threat to natural occurrences of this association.

ID TIPS: Dominated by red alder with a sword fern understory. Located on upland sites that are not landslides, coastal bluffs, or riparian floodplains or terraces.

ENVIRONMENT: Sites are moist to very moist and relatively nutrient-rich. Parent materials include glacial till, glacial lake and marine sediments, volcanic ash, and colluvium. Slopes are usually gentle to moderate, northerly and easterly aspects are probably more common.
Precipitation: 27-60 inches (mean 38), undoubtedly greater also
Elevation: sea level to 1600 feet
Aspect/slope: various/ slope 3-48% (mean 17)
Slope position: all except ridgetops
Soil series: various, includes Whidbey, Cathcart

DISTURBANCE/SUCCESSION: This is an early- to mid-seral association that can regenerate after fire, windthrow, or timber harvest. Red alder is prolific after disturbance that exposes mineral soil, and it has therefore thrived on productive sites where conifer forest have been harvested and herbicides were not applied. Alder is short-lived (about 100 years). If conifers establish in the understory, then they are expected to dominate after the alder dies in the absence of further disturbance.

Vegetation Composition Table (selected species):
Con = constancy, the percent of plots within which each species was found;
Cov = cover, the mean crown cover of the species in plots where it was found.

Trees	**Kartesz 2003 Name**	**Con**	**Cov**
red alder	Alnus rubra	100	82
western hemlock	Tsuga heterophylla	80	2
Douglas-fir	Pseudotsuga menziesii var. menziesii	40	12
bigleaf maple	Acer macrophyllum	20	13
grand fir	Abies grandis	20	8
Shrubs, Subshrubs			
salmonberry	Rubus spectabilis var. spectabilis	100	33
trailing blackberry	Rubus ursinus ssp. macropetalus	80	8
red huckleberry	Vaccinium parvifolium	80	7
red elderberry	Sambucus racemosa var. racemosa	60	4
swamp currant	Ribes lacustre	60	2
oceanspray	Holodiscus discolor	40	7
dwarf Oregongrape	Mahonia nervosa	40	6
Graminoids			
Dewey's sedge	Carex deweyana var. deweyana	80	2
nodding trisetum	Trisetum canescens	60	2
Columbia brome	Bromus vulgaris	60	1
blue wildrye	Elymus glaucus	40	2
bearded fescue	Festuca subulata	40	2
Forbs and Ferns			
sword fern	Polystichum munitum	100	57
spreading woodfern	Dryopteris expansa	80	5
Siberian springbeauty	Claytonia siberica var. siberica	60	13
stinging nettle	Urtica dioica ssp. gracilis	60	8
bracken fern	Pteridium aquilinum var. pubescens	60	6
threeleaf foamflower	Tiarella trifoliata var. trifoliata	60	6
lady-fern	Athyrium filix-femina ssp. cycolosorum	60	3
sweet-scented bedstraw	Galium triflorum	60	1
enchanter's nightshade	Circaea alpina ssp. pacifica	40	4
fringecup	Tellima grandiflora	40	+
western starflower	Trientalis borealis ssp. latifolia	40	+
Pacific bleedingheart	Dicentra formosa ssp. formosa	20	3

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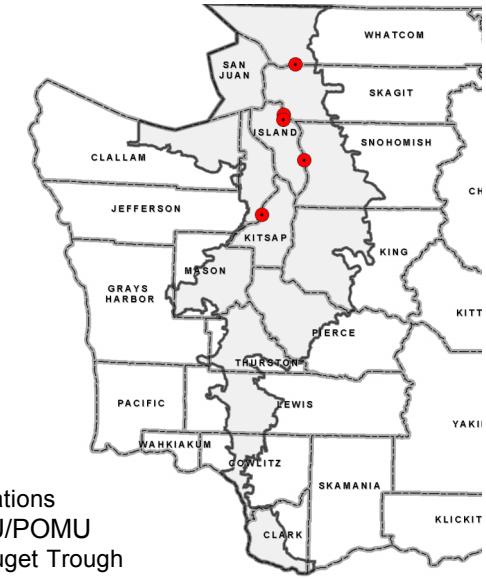

Plot locations
of ALRU/POMU
in the Puget Trough

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VEGETATION: Dominated by red alder. Western hemlock is usually present in relatively small amounts, mainly in the understory. Douglas-fir occurs in about half the stands and has substantial cover, usually in the subcanopy. Bigleaf maple can also be prominent. Understory is characterized by dominance of sword fern. Salmonberry is almost always present and usually forms a prominent to dominant shrub layer. Other species usually present include trailing blackberry, red elderberry, red huckleberry, swamp currant, Dewey's sedge, spreading woodfern, Siberian springbeauty, ladyfern, stinging nettle, bracken fern, threeleaf foamflower, and sweet-scented bedstraw.

CLASSIFICATION NOTES: This association has been recognized in general by Franklin and Dyrness (1973), and described specifically from the Puget Trough by Chappell (2001). Somewhat similar associations have been described from riparian floodplains (e.g., Diaz and Mellen 1996), but they typically have higher abundance of moisture-loving species like youth-on-age (*Tolmiea menzeisii*).

MANAGEMENT NOTES: English ivy (*Hedera helix*), a non-native species, can cause major changes in this association. Herb Robert (*Geranium robertianum*) is another non-native invader that is of concern. Sites that support this vegetation are likely to be very productive for conifer growth. If conifers are absent from the stand, succession without any disturbance could lead to shrub dominance.